

## REMARKS

Claims 1 to 5, 9, 10, 13 to 20 and 22 to 30 continue to be in the case.

New Claim 31 is introduced.

New claim 31 is based on the language of claim 25.

### *The Office Action refers to Claim Objections.*

Claim 1 stands objected to because of the following informalities: The final line, above is misspelled. Appropriate correction is required.

The present amendment corrects the last line of claim 1.

### *The Office Action refers to Claim Rejections - 35 USC § 103.*

Claims 1, 2, and 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen (US 5,773,943).

With respect to claim 1, Andersen teaches a drive device for passage barriers (abstract) or thoroughfare barriers and door or gate drives, having a brushless DC servo motor, characterized in that a DC servo motor (fig. 2,11) has an associated servo controller (fig. 9, 50) and the output shaft (fig. 3, 8) of the DC servo motor; the drive shaft (fig. 3, 4) of the barrier element; a horizontal plate (fig. 3, 20) wherein the DC-servo motor is attached from ; wherein the output shaft penetrates (fig. 3, shaft 8 penetrates up through horizontal plate) through the horizontal plate and is attached to a vertical edge of the barrier element; a post (fig. 3,4) attached to the upper side of the horizontal plate and surround the drive shaft in an area disposed above the horizontal plate.

Claim 1 reads: “a DC servo motor (5) has an associated servo controller and an output shaft of the DC servo motor (5) is connected directly and without an interconnection of a gear mechanism to the drive shaft of a barrier element (2);”. This language is in part repeated in the allegation of the features of the Andersen reference, but the following language part of this section “is connected directly and without an interconnection of a gear mechanism to” is

left out in the allegation relating to the showing of Andersen. The feature “an output shaft of the DC servo motor (5) is connected directly and without an interconnection of a gear mechanism to the drive shaft of a barrier element (2);” is clearly not present in the Andersen reference. The direct connection of a DC-servo motor output shaft to a barrier shaft without a gear mechanism is a patentable feature of the present invention in providing a direct drive of the barrier, a sensitivity of motion, an immediate force transfer, automatic alignment, and stability to the connection.

Claim 1 reads further: “a horizontal plate (3), wherein the DC-servo motor is attached from below to the horizontal plate (3)”. The reference Andersen shows in Fig. 2 a motor 11 supported by a frame 16. The location of the motor 5 according to claim 1 is attached from below to the horizontal plate. In contrast the motor 11 of the reference Andersen is not attached from below to the cover 20. Thus claim 1 is clearly different from the teaching of the Andersen reference.

Anderson does not teach the drive shaft directly connected without an interconnection of a gear mechanism. It would have been obvious since it is commonly known in the art to have a shaft protruding directly from motor, it has not been disclosed that it solves any stated problem and it appears that the invention would perform equally well with a gear mechanism.

The reference Andersen teaches in column 6, lines 51 through 57: “FIG. 7 shows another embodiment of the drive unit 10 of the inventive revolving door, wherein the electric motor 11 is coupled to two worm gearing units 9a and 9b which are connected in series to the output of the electric motor 11. The output shaft of the final worm gearing unit 9b may be connected via a coupling 14 to a shaft 8 for rotating the rotating part 1 of the

revolving door.”. This teaching of the Andersen reference is an instruction to employ plenty of worm gearing units and/or couplings. The reference Andersen thus clearly teaches away from the present invention.

It may well be that it is known in the (electric motor) art to have a shaft protruding directly from a motor. The present application in contrast requires in the claims that a shaft of a motor be directly connected to a shaft of a rotating barrier. The direct connection increases responsiveness of the turning of a passage barrier, gives stability to the construction, and better exploits the force generated by the electric motor. It is furthermore easier to control the position and/or speed of the barrier with a single shaft for motor output and barrier motion drive.

The disadvantages associated with the prior art are set forth in US Patent Application Publication US 2007/0246324 A1 paragraphs 6 to 9. The advantages associated with a direct fixed connection of output shaft and drive shaft are noted in US Patent Application Publication US 2007/246324 A1, paragraphs 11 to 14, and in paragraph 17, in particular lines 5 to 8.

Furthermore, advantages of the present invention have been set forth in Applicant’s response amendment dated February 4, 2009, page 11 through 13 as follows:

“The drive device of the present invention is associated with the following advantages: it is no step down gear, no coupled gear, no coupler mechanism, and no cam drive between the output shaft of the DC servo motor and the drive shaft of the barrier element is required. This way the device is capable of reacting quicker and the production costs are lower; there are no interfering noises caused by the gear drive, the drive device runs nearly without noise, the drive device can be universally employed and can be adapted to different requirements;

the parts subject to wear are reduced to an absolute minimum, no parts subject to wear are present in fact with the exception of the two motor bearings, and therefore practically no maintenance work is required (compare also page 4, lines 22 ff of WO 2005/049948 A1). A clear energy-saving results not only by the use of a servomotor but in particular based on the lack of gear friction such that the degree of effectiveness of the device is clearly improved, which is particularly important today for new technologies.

“The direct drive according to the present invention furnishes in addition an absolute domination of force, speed and accuracy of position in comparison to known drives. An optimum control of the blocking behavior and of the reversing behavior results therefrom, which increases both the protection of persons as well as also the safety level. Known passage barriers develop a high impact or counter force for example toward the end of the motion of the barrier member, which can represent an increased danger of wounding for a person and in particular for children if they are present in the region of the barrier. This danger can be completely eliminated with the new direct drive; the direct drive allows on the one hand a high blocking or release speed and on the other hand nevertheless a soft reaching of the positions. In particular, blocking barriers to persons have to be able to react quickly. The closure motion for example to cut off access or passage for unauthorized person without endangering the respective person (WO 2005/049948, p. 2, lines 22 to 28); if a person is disposed in the blocking region, then the closure

process has to be interrupted immediately and quickly and be reversed (WO 2005/049948, p. 3, lines 4 to 26). The closure process is to proceed quickly, but is not to end with a hard impact in the final position, instead the final position is to be contacted softly (WO 2005/049948, p. 3, lines 31 to 33). In case of a current failure then the blocking barrier is to be opened automatically (WO 2005/0049948, p. 3, lines 18 and 19).“.

Anderson does not teach servo motor mounted to horizontal plate. It would have been an obvious matter of design choice to mount the motor to the horizontal plate, since applicant has not disclosed that it solves any stated problem and it appears that the invention would perform equally well with motor not being bolted to above plate.

The horizontal plane (3) allows for easy assembly of the electric motor 5 and of the post 1 to a common support element 3. This common support element allows to align the post 1 and the electro motor with their axes permanently. Alignment of the axes of the pot and of the electric motor is important for satisfactory and quiet operation of the barrier. There is no equally well performance with a motor not being bolted to the above plate, since it would be very difficult to keep the post 1 and the motor 5 aligned over a longer time period without a presence of the plate 3. The possibility of permanently aligning the post and the motor with the aid of plate 3 is an advantage of the present invention over the construction of Andersen.

With respect to claim 2, Andersen teaches a compact complete control device which comprises the servo controller (fig. 9, 50) and a logic section (fig. 9, 52) and a housing (fig. 3, 18), and which serves to control (column 7, lines 5-15) the motor as a function of signals. Anderson does not teach the housing not containing the dc servo motor. It would have been obvious to one having ordinary skill in the art at the time of the invention to have a separate housing for the

control system to provide the advantages of electrical access and safety, as it is commonly known in the art.

Applicant respectfully disagrees. The reference Andersen in column 5, lines 44 to 46 says: "The drive unit 10 with the worm gearing 9 is placed on the bottom 24 of the pan 18, e.g. by means of a frame 16, as illustrated in Fig. 3.". This housing 18 of the reference Andersen encloses the electric motor 11 in clear contradiction to the express requirement of claim 2 requiring "a housing not containing the DC-servo motor.". Thus the reference Anderson teaches away from the express requirement of claim 2 of a housing not containing the DC-servo unit. A person of ordinary skill in the art would have implemented the teachings of the reference Andersen.

However, claim 2 also contains the clause "wherein a rotation axis of the output shaft of the DC-servo motor (5) coincides with a rotation axis of the drive shaft of the barrier element (2)". This feature of claim 2 is not taught in the reference Andersen. This clause of the claim 2 is a precondition for having one same shaft for motor output and for barrier rotation drive.

With respect to claim 15, Andersen teaches drive device for passage barriers or thoroughfare barriers and door or gate drives, comprising a horizontal plate having a hole (fig. 3, 20 horizontal plate with hole for shaft 8 the thread through); a brushless DC servo motor (fig. 2,11) mounted from below to horizontal plate; an output shaft (fig. 3, 8) formed at the brushless DC servo motor, extending through the hold in the horizontal plate to an upper side of the horizontal plate (fig. 3, above floor 6) and having an axis (fig. 3, dash line down 4 and 8); a barrier element (abstract) disposed on the upper side of the horizontal plate (fig. 3, barrier is on upper side of floor 6); a drive shaft (fig. 3,4) formed at the barrier element and having an axis (fig. 3, dash line down

4 and 8), wherein the output shaft of the brushless DC servo motor is solidly attached to the drive shaft formed at the barrier element (fig. 1,1) and wherein the axis of the output shaft and the axis of the of the drive shaft coincide (fig. 3); a servo controller (fig. 9, 50) connected to the brushless DC servo motor. Anderson does not teach servo motor mounted to horizontal plate. It would have been an obvious matter of design choice to mount the motor to the horizontal\*plate, since applicant has not disclosed that it solves any stated problem and it appears that the invention would perform equally well with motor not being bolted to above plate.

Applicant respectfully disagrees.

Claim 15 requires “a brushless DC servo motor (5) mounted from below to the horizontal plate (3);”. In contrast, the reference Andersen teaches to employ any electric motor. The electric motor 11 of the reference Andersen is not mounted from below to a horizontal plate, but instead Andersen teaches in column 5, lines 43 to 46: “The drive unit 10 with the worm gearing 9 is placed on the bottom 24 of the pan 18, e.g. by means of the frame 16, as illustrated in Fig. 3.”. Thus the reference Andersen uses a frame 16 placed on the bottom of pan 18 to support the electric motor 11, whereas claim 15 mounts the brushless DC-servo motor 5 from below to the horizontal plate 3. Claim 15 also requires “an output shaft formed at the brushless DC servo motor (5), extending through the hole in the horizontal plate (3) to an upper side of the horizontal plate (3) and having an axis;” and “a drive shaft formed at the barrier element (2) and having an axis, wherein the output shaft of the brushless DC servo motor (5) is solidly attached to the drive shaft formed at the barrier element (2) and

wherein an axis of the output shaft and an axis of the drive shaft coincide;”.

This means that the output shaft is solidly connected to the drive shaft and that the axis of the output shaft coincides with the axis of the drive shaft.

The reference Andersen, in contrast, teaches the disposition of one or more worm gears between the output shaft and the drive shaft and the axes of the shafts do not coincide. Thus the construction of the transfer of the rotary torque according to claim 15 is clearly different from the teaching of the Andersen reference.

Claims 3,4, 9,10,13,14,19-20, and 22-23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen (US 5,773,943) in view of Becker (US 5,245,258).

Applicant respectfully traverses the reference Andersen as above. The reference Becker et al. teaches an electrically powered power window unit. The reference Becker et al. says in column 1, lines 7 to 15: “The prior art includes electrically powered power window units for raising and lowering the windows of a motor vehicle; these electrically powered power window units are suitable for installation in the doors of motor vehicles and have either an electric motor connected to a transmission or a geared motor as the drive unit, which can be connected to the motor vehicle battery by a switch.”. The reference Becker et al. in column 1, lines 30 to 38, continues: “Because different forces are necessary to raise and lower the window, the drive unit has an electronic control and regulating system, which is connected to an operating switch, and can also be equipped with a speed sensor. Depending on the position and way the operating switch is used, the window is completely raised, completely lowered or held in a desirable intermediate



position, whereby the electronic control and regulating system ensures a smooth raising or lowering procedure.”

According to the reference Becker et al., column 1, lines 43 to 47: “The drive unit for this configuration of the prior art consists of a geared motor 2 with an electric motor 21 and a connected transmission 22, which is connected by means not shown here to the cable loop for raising and lowering the window.’

The reference Becker et al. in column 2, lines 57 to 66 then continues: “The object of the current invention is to create an electrically powered power window unit of the generic type described above, which results in low component and installation costs by eliminating installation errors, guarantees great resistance to moisture without complex and expensive seals and makes possible modular construction, whereby a drive unit can be connected to various, easily accessible and interchangeable electronic control and regulating systems for various motor vehicle types and models.”

Thus the reference Becker et al. is concerned with creating an electrically powered power window unit with a plug-in module 5.

With respect to claim 3, Andersen does not teach characterized in that the logic section is designed as a pluggable logic circuit board. Becker teaches in that the logic section is designed as a pluggable logic (fig. 2, 5) circuit board.

As set forth above, the plug-in module 5 is provided for the electrically powered power window unit of the reference Becker et al., column 5, lines 28 to 33. The reference Becker et al. is not directed to plug-in modules for passage barriers, but with the creation of plug-in modules 5 for power windows. Thus, a plug-in module 5 as specified by the reference Becker et al.

will not work with the passage barrier of the present application.

It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate a pluggable logic board to the motor control system of Anderson for the advantage of to accomplish an easily installed assembly which can be programmed as desired, as taught by Becker (column 5, lines 49-55; column 7, lines 34-52).

The Office Action proposes to incorporate a pluggable logic board according to the reference Becker et al. to the motor control system of the reference Andersen. This means that the pluggable logic 5 of the reference Becker et al. is added to the motor control system of the reference Andersen.

The reference Andersen teaches in column 7, lines 5 through 13: "FIG. 9 illustrates schematically an embodiment of the invention wherein the operation of the revolving door is controlled by a control unit 50 preferably including a microprocessor 52 and a frequency converter 54. Here the control unit 50 is connected to the sensors 15 so as to be able to detect the presence of a person entering or exiting the revolving door, and the control unit 50, through the microprocessor 52 and frequency converter a54 controls the operation (e.g., speed) of the drive unit 10. ". The plug-in module 5 of the reference Becker will not be able to detect the presence of a person entering or exiting the revolving door. Thus adding the plug-in module 5 of the Becker et al. reference to the motor control system of Andersen will not change the situation of detecting the presence of a person entering or exiting the revolving door of the combined references versus the reference Andersen alone. Thus in the combination of the references Andersen and Becker et al. proposed in the Office Action, "the presence of a person entering or exiting the revolving door" would still be detected by the control unit 50 of the reference Andersen and not by the pluggable logic 5 of the Becker reference.

Applicant further urges that the plug-in module 5 of the reference Becker et al. is made for a vehicular power window unit, it will not function in the context of a passage barrier, which has requirements different from those of a vehicular power window unit.

With respect to claim 4, Andersen does not teach that different logic circuit boards can be plug-connected, different movement profiles and programs which are directed at various applications are prespecified on said logic circuit boards, and said logic circuit boards have different numbers of inputs and outputs and different operator control and display elements, depending on requirements. Becker teaches different logic circuit boards can be plug-connected, different movement profiles and programs which are directed at various applications are prespecified on said logic circuit boards, and said logic circuit boards have different numbers of inputs and outputs and different operator control and display elements, depending on requirements (column 5, lines 49-55; column 7, lines 46-52). It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate a pluggable logic board that has the advantage of being able to be programmed as desired, as taught by Becker (column 5, lines 49-55).

Claim 4 specifies a presence of plug-connectable logic circuit boards with different prespecified movement profiles. The reference Becker specifies in column 7, lines 46 to 52: "Finally, due to the modular design, all sorts of electronic device can be located on the plug-in module, so that jamming protection circuits or regulating circuits for raising or lowering of the window, as well as a combination of window controls with a central locking sytem are possible. ". The reference Becker et al. fails to teach or suggest plug-connectable logic circuit boards with different prespecified movement profiles as required according to claim 4. Therefore, claim 4 patentably distinguishes over the reference Becker.

With respect to claim 9 and 23, Anderson does not teach a commutation and position control in the motor are performed by means of a magnetoresistive sensor. Becker teaches a commutation and position control (column 6, lines 25-40) in the motor are performed by means of a magnetoresistive sensor (column 6, lines 25-27;"inductive measuring device"). It would have been obvious to one having ordinary skill in the art at the time of the invention to include a sensor to provide the advantage of getting feedback of speed/position signals, as taught by Becker.

The reference Becker et al. teaches a plug-in module 5 for vehicular power window units. The reference Andersen teaches a drive device for a revolving door. There is no suggestion within the four corners of the references, why the construction of Andersen should be furnished with the magnetoresistive sensor of the reference Becker et al. Furthermore, furnishing the reference Andersen with the magnetoresistive sensor would still not provide for a processing of sensor signal by the Anderson reference and would not result in the passage barrier of claim 9 of the present application.

As far as claim 23 requires a presence of a magnet wheel or a polarized magnetic ring, both the reference Andersen and the reference Becker et al. agree not to provide this feature of claim 23. It is therefore respectfully submitted that claim 23 defines the invention patentably versus the references Andersen and Becker et al.

With respect to claim 10, Andersen does not teach commutation and position control in the motor are performed by means of resolvers or encoders or Hall sensors.

Becker teaches a commutation and position control (column 6, lines 25-40) in the motor are performed by means of resolvers or encoders or Hall sensors (fig. 2, 31, 32).

The teaching of the reference Becker et al. is directed to a vehicular power window unit. The reference Andersen is concerned about a drive

device for a revolving door. The reference Becker et al. teaches to locate two Hall sensors 31, 32 to partly surround the transmitter part 30 of the speed sensor for an improved electro-magnetic connection. There is no mentioning in the reference Andersen of any need for an improved electro-magnetic connection and consequently a person of ordinary skill in the art would not add the two Hall sensors of the reference Becker et al. to the reference Andersen.

With respect to claim 13, Andersen does not teach in that the inputs and outputs are separate from the actual motor control system/logic circuit board and designed as an independent module. Becker teaches the inputs and outputs are separate from the actual motor control system (fig. 2, 21, 22)/logic circuit board and designed as an independent module (fig. 2, 6).

The drive unit 21 and 22 of the reference Becker et al. (column 5, line 29) includes electric motor 21 (column 1, line 44) and transmission 22 (column 1, line 45). This is not a motor control system as alleged in the Office Action.

The reference Becker et al. teaches in the last sentence of the Abstract: "The electronic control and regulating unit (4), the drive unit (2) and the rotation speed sensor (3; 30, 31, 32) are arranged in a common damp-proof housing (1)". There is no mentioning here of independent modules.

It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate a pluggable logic board with various input/outputs that has the advantage of being able to be programmed as desired, as taught by Becker (column 5, lines 49-55).

A presence of inputs and outputs, which are separate from the actual motor control system/logic circuit board according to claim 13, are different from a pluggable logic board as alleged in the Office Action.

Applicant observes that there may be no need of being able to be programmed as desired. As was pointed out above, the reference Andersen is directed to a drive device for a revolving door and the reference Becker et al. is directed to a vehicular power window unit, which have different requirements.

With respect to claim 14, Andersen does not teach in that the inputs and outputs can be connected by a pluggable bus connection or a pluggable, multicore cable. Becker teaches the inputs and outputs can be connected by a pluggable bus connection or a pluggable, multicore cable (column 7, lines 10-52). It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate a pluggable logic board with multiple pins/cables/control signals that has the advantage of being able to be programmed, as taught by Becker (column 5, lines 49-55).

While multi pin connections may be appropriate for vehicular power window units according to the reference Becker et al., they may not be desirable for a drive device for a revolving door according to the Andersen reference.

With respect to claim 19, Anderson teaches a post (fig. 3, 4) attached to upper side of the horizontal plate and surrounding the drive shaft (fig. 3, 8) in an area disposed above the horizontal plate (fig. 3, 20).

The reference Andersen in column 5, lines 60 to 62 says: "The center column 4 can either be connected directly to the shaft 8, or the connection can also be made by means of an additional coupling element.". This language sets forth that the element 4 of the reference Andersen is a shaft and not a post. The center column 4 is not attached to the upper side of the horizontal plate 20. Andersen does not teach a transmitter system which is integrated in the motor and supplies the required control signals. Becker teaches a transmitter system (fig. 2, 4) which is integrated

in the motor and supplies the required control signals (column 5, lines 49-55).

The system 4 taught by the reference Becker et al. is an electronic control and regulating system and not a transmitter system as alleged in the Office Action.

It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate a pluggable logic board/control system that has the advantage of being able to be programmed as desired, as taught by Becker (column 5, lines 49-55).

The reference Andersen teaches a control unit 50 with microprocessor 52 and frequency converter 54. There is no motivation in a person of ordinary skill in the art to incorporate a pluggable logic board/ control system into the reference Andersen, in particular since this would duplicate certain functions.

With respect to claim 20, Andersen and Becker do not teach in that the motor mount is formed as a fixed mount on the side of the transmitter system. Becker discloses the claimed invention except for the fixed mount. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the circuit assembly fixed, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1993). It would have been an obvious matter of design choice to mount the motor to the horizontal plate, since applicant has not disclosed that it solves any stated problem and it appears that the invention would perform equally well with motor not being bolted to above plate.

Applicant respectfully submits that a more stable system is constructed by mounting the motor to the horizontal plate, in particular where the post is also mounted to the horizontal plate. Thus the attachment furnishes the function of additionally stabilizing the passage gate.

With respect to claim 22, Andersen does not teach in that the plug connection is designed to be secure against polarity reversal and is provided with a locking means. Becker teaches the plug connection is designed to be secure against polarity reversal and is provided with a locking means (column 7, lines 46-52).

The recited reference Becker et al. in column 7, lines 46 to 52 does not mention polarity reversal. As to the alleged locking system, the reference Becker et al. mentions a central locking system. Such central locking system is to be seen in the context of vehicular power window unit, wherein a vehicle has multiple windows and their central locking and unlocking. However the central locking feature in the context of the security of motor vehicles is not present in the case of the revolving door of Andersen.

It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate a pluggable logic board that has the advantage of being able to be programmed as desired such as locking means, as taught by Becker (column 5, lines 49-55).

Applicant respectfully disagrees. The additional pluggable logic board would lead to overlap between the functions of the control unit 50 of Andersen and the functions of the additional transplanted pluggable logic board of the reference Becker et al. The result of such incorporation of the additional pluggable logic board could be a malfunctioning of the combined system.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen (US 5,773,943) in view of Becker (US 5,245,258) and Heise (US 4,530,183)

The references Andersen and Becker et al are respectfully traversed as above.

With respect to claim 16, Andersen teaches a logic section (fig. 9, 52) connected to the servo controller; a housing (fig. 3,18) surrounding the servo controller and the logic section,



wherein the servo controller, the logic section, and the housing form a compact complete control device which serves to control the brushless DC servo motor as a function of signals (column 5, lines 45-62). Anderson does not teach wherein the servo controller is furnished as a circuit board. Becker teaches a circuit board (fig. 2, 6). It would have been obvious to one having ordinary skill in the art at the time of the invention to use a circuit board with plug in capabilities that has the advantage of being able to be programmed as desired, as taught by Becker (column 5, lines 49-55). Anderson and Becker does not teach a locking unit furnishing safe operation and holding in a open or closed position, allowing barrier to stop in any position. Heise teaches a locking unit and the barrier stopping in any position (fig. 5, 80 and 96). It would have been obvious to one having ordinary skill in the art at the time of the invention to use a locking unit and stopping position, to provide the advantage of being held open or closed, as taught by Meise. Anderson and Becker does not teach an energy storing mean wherein the barrier is automatically moved to open position in power failure. It would have been obvious to one having ordinary skill in the art at the time the invention was made to automatically because its known in the art of power closures to open in event of a power failure for safety purposes.

Claim 16 requires “a locking unit (6) furnishing safe operation and holding the barrier element (2) securely in its closed position and in its open position and allowing the brushless DC-servo motor (5) and, respectively, the barrier element (2) to stop in any position;”.

The reference Heise et al. in column 4, lines 27 to 31 states: “Similarly, the lock circuit 96 responsive to the lock switch 80 and optional remote push button circuit 98 responsive to the remote switch 81 are also responsive to provide an indication to stop rotation of the motor 46.”

The claim 16 requires that a locking unit (6) holds the barrier element (2) securely in its closed position and its open position. The reference Heise

instead says that the lock switch 80 is responsive to provide an indication to stop rotation of the motor 46. There is a difference between holding a barrier element (2) securely in its closed position and its open position and to provide an indication to stop rotation of a motor.

***The Office Action refers to Allowable Subject Matter.***

Claims 17 and 18 are allowable and Claims 5, 24, and 26-30 are objected to.

Applicant very much appreciates the recognition of allowable subject matter in the Office Action. The claims 5, 24, and 26 to 30 have now been rewritten to put appropriate claims in independent form.

***The Office Action refers to Response to Arguments***

Applicant's arguments filed 10/16/09 have been fully considered but they are not persuasive and moot on new grounds of rejection

With respect to claims 1, and 15, applicant's first argument is the Anderson does not teach "the output shaft being connected directly and without an interconnection of a gear mechanism." Anderson does not teach the drive shaft directly connected without an interconnection. It has not been disclosed that it solves any stated problem and it appears that the invention would perform equally well with a gear mechanism. And in situation some kind of damage occurs to the shaft directly connected to the motor, fixing or replacing the part is more difficult.

The single shaft construction of the present invention is associated with substantial advantages. There is no alignment necessary since there is only a single shaft. The complete rotary power of the brushless DC-servo motor is transferred to the barrier element. An intermediate gearing is always a point of weakness and subject to breakdown. The single shaft makes for easy maintenance. The lesser number of parts of the passage barrier

according to the present invention is associated with cost savings.

With respect to claims 1, applicant's second argument is the Anderson does not teach or show a horizontal plate. The examiner disagrees, and feels Anderson teaches a horizontal plate (fig. 3, 20).

More precisely the second argument should have stated, Andersen does not have the motor attached from below at the horizontal plate.

With respect to claims 2, applicant's third argument is the Anderson fails to show an output shaft penetrating through a horizontal plate. The examiner disagrees, and feels Anderson teaches a shaft (fig. 3, 8) penetrating up through the horizontal plate (fig- 3).

Andersen does not show the output shaft of the motor penetrating through the horizontal plate, Andersen shows the barrier drive shaft 4 penetrating through a horizontal plate.

With respect to claims 2, applicant's four argument is the Anderson fails to teach a housing not containing the servo motor. It is common known in industrial machinery to have separate housing for the control system to provide electrical access and cover safety concerns.

Applicant agrees that separate housings are known.

With respect to claims 3, 4, 5, and 19, applicant's fifth argument is there are no suggestions to combine the references of Becker and Anderson, would be non functioning and unsuitable.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, both are electrical control systems, with control circuits. The applicants language starts

taking a position away from the control system to programmable circuit board, were it is commonly known in industrial electronics to have in pluggable logic board, for easy of maintenance. And it is only being used for the plugged in aspect, not with the same program and used between the two.

The present application and the references Andersen and Becker et al. have each a different and separate application field. There are numerous systems with different plug-in modules, which may be incompatible.

## SECONDARY INDICATIONS OF PATENTABILITY

The present invention has been already a huge commercial success.

A barrier similar to what is shown in the drawing was installed about 2000 times at railway stations in the Netherlands.

In Asia there are already more than 1000 installations of passage barriers according to the present application.

Installations of the invention passage barrier have been made in the following countries:

Singapore

Malaysia

Dubai

Australia

Abu Dhabi

Sharjah

Fujairah

Hong Kong

Cambodia

Burma

Indonesia

Nigeria

Al Ain

Ras Al Khaimah

China

Two videos are available to see the invention passage barrier in operation.

Reconsideration of all outstanding rejections is respectfully requested.

All claims as presently submitted are deemed to be in form for allowance and an early notice of allowance is earnestly solicited.

Respectfully submitted,

Lothar Lais

By: \_\_\_\_\_

*Horst M. Kasper*

Horst M. Kasper, his attorney,  
13 Forest Drive, Warren, N.J. 07059  
Tel.: (908) 526-1717 Fax: (908) 526-6977  
Reg. No. 28,559; Docket No.: ERT208

/Rep/am